

REMARKS

The Examiner rejected claims 1-9 and 14-15 under 35 U.S.C. 102(e) as being unpatentable over U.S. Pub. No. 2005/0041689 by Wu et al that describes an efficient statistical remultiplexer for processing a number of channels that include video data (see Abstract). More specifically, the reference describes a statistical remultiplexer system that optimizes channel bit rates by estimating a bit rate need parameter for each channel using statistical information derived from that particular channel. (It should be noted that although not specifically listed by the Examiner, the Applicants presume that claims 23-29 were also rejected under 35 U.S.C. 102(e)).

In support of the rejection, the Examiner cites paragraph 0077 and Fig. 1 of the Wu reference which describes generating a bit rate need parameter for each frame in the transport packet in the statremux based on statistical information obtained from a lookahead buffer within a transcoder processing element (TPE) that computes the average quantizer scales values and the number of bits for every input frame to be transcoded. A quantization level processor (QLP) then calculates the bit rate need parameter on a per frame basis and allocates a transcoding bit rate to the TPEs. Therefore Wu is generating statistics for only those frames that are to be transcoded and does not teach or remotely suggest generating evaluation metrics for the entire statremux.

In contrast, the evaluator utilizes information derived from one or more input bitstreams to the statremux and the output stream from the statremux. Using this information, the inventive evaluator generates one or more evaluation metrics that characterizes the performance of the statremux as a whole. For example, such evaluation metrics include: an amount of bit rate reduction, a change in video quality, wasted output bandwidth, decoder buffer model data level, bit rate reduction characteristics, and time delay. Specifically, Claim 1 as amended recites,

An apparatus for generating one or more evaluation metrics associated with the performance of a statistical remultiplexer as a whole, the apparatus comprising:

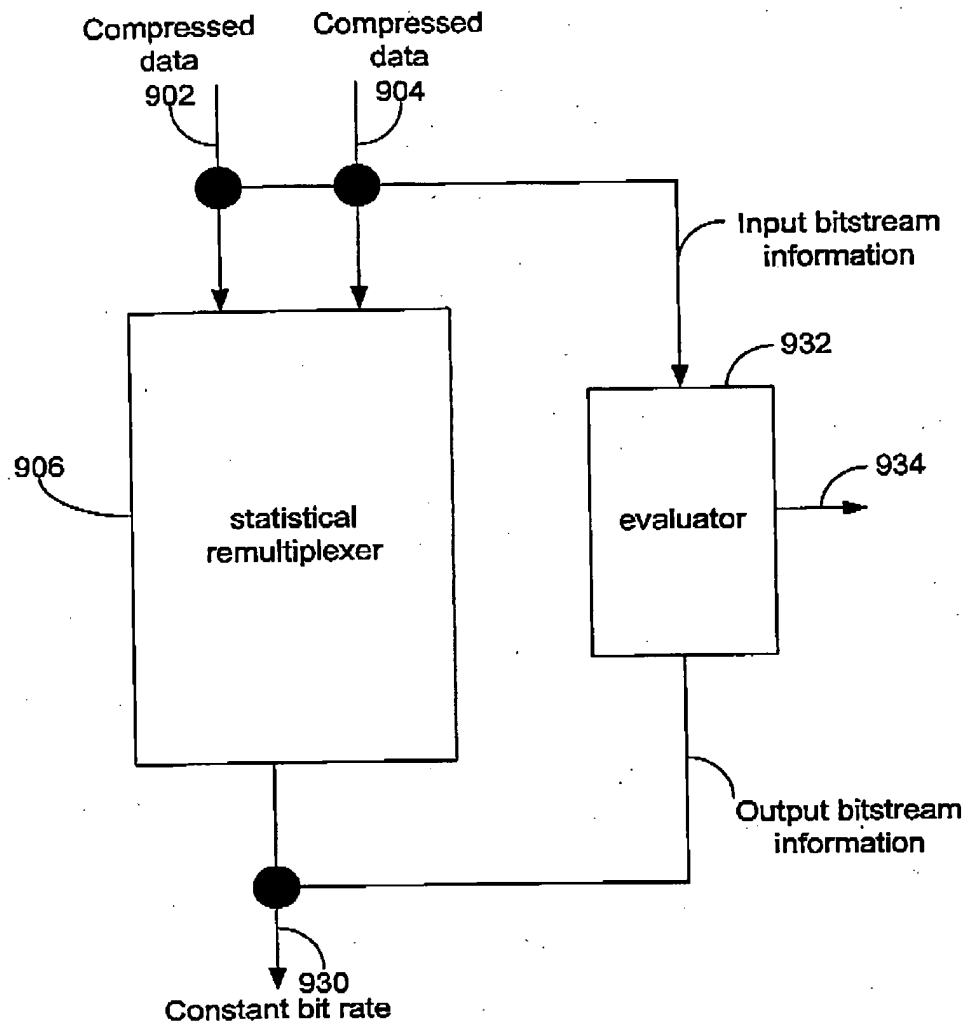
a first input for receiving information related to an input bit stream to the statistical remultiplexer;

a second input for receiving information related to an output bit stream from the statistical remultiplexer;

logic for generating said one or more evaluation metrics using the received information from both said input and said output bit streams that provides a quantitative measure of the performance of the statistical remultiplexer; and

at least one output for outputting said one or more evaluation metrics of the statistical remultiplexer

In this way, the evaluator as recited in claim 1 quantitatively evaluates the performance of a statremux as a whole and not, as required by the Wu reference, the individual frames within a particular transport packet. The Applicants respectfully direct the Examiner's attention to the attached drawing that shows a simplified layout of Fig. 9 of Ramakrishnan et al.



Clearly the evaluator 932 is utilizing information from an input bitstream (902 and/or 904) before it enters the statremux 906 and information from the output bitstream 930 after it exits the statremux 906 to generate the evaluation metrics 934. Therefore, the Applicants believe that claim 1 as amended is neither suggested nor rendered obvious by Wu and request that the Examiner withdrawal the rejection of claim 1. Accordingly, the Applicants believe that all dependent claims 2-4 are also allowable over the cited art for at least the reasons stated for claim 1 from which they depend.

Amended independent claims 5, 26 and 28 recite essentially the same limitations as amended claim 1. Therefore, the Applicants believe that independent claims 5, 26 and 28 for at least the reasons stated above are also allowable.

The Examiner rejected claims 10-13 as being unpatentable under 35 U.S.C. 103(a) over the Wu patent discussed above in view of Lin et al. U.S. Pub. 2003/0081676 A1. However, since the secondary reference fails to cure the fundamental deficiency of Wu, claims 10-13 are also believed to be allowable.

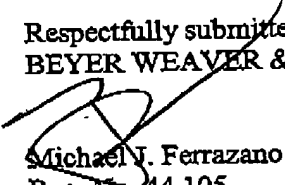
Furthermore, all remaining dependent claims depend either directly or indirectly from claims 1, 5, 26 and 28 and are also believed to be allowable for at least the reasons stated above.

Therefore, the Applicant believes that all pending claims are allowable.

CONCLUSION

In view of the foregoing, it is respectfully submitted that all pending claims are allowable. Should the Examiner believe that a further telephone conference would expedite the prosecution of this application, the undersigned can be reached at the telephone number set out below.

Respectfully submitted,
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